

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1-6, 11-13 and 14 are rejected under 35 U.S.C. 103 as being unpatentable over applicant's admitted prior art in view of the patents to Weber and Henkel.

Claim 7 is rejected as claim 1, and further in view of the patent to Viebach.

Claim 10 is rejected under 35 U.S.C. 103 as claim 1, and further in view of the patent to Pelzer.

After carefully considering the Examiner's grounds for the rejection of the claims, applicant has amended claim 1, the broadest claim on file, to define that the loops are vertical. This feature is disclosed in the original specification on page 19, second paragraph, describing the sagging of the transporting chain, which means that the chain is moved under the influence of gravity which of course is in a vertical direction.

Before the analysis of the prior art it is believed to be advisable to first of all more clearly explain the present invention.

The object of the present invention is to adjust the sag of loops of a transporting chain between two adjacent drives of a treatment station. This object may be more clarified, by the orientation of the loops, namely vertical loops. The problem is, that there is no difference in the moment of these drives as long as there is a loop. Of course this statement is only to that extent valid, that there is a loop on both sides of the drive and that the loops have the same lengths. If the loops have different sag, the moment will be proportional to the different sag due to the different weight of loops.

These sentences should only clarify the specific operating conditions of the treatment machine according to the present invention. The moment of the drive is only changing considerably, as soon as there ARE guides and the drives are operated in a manner, that the chain is running against these guides. If the guides would not be there, no considerable change of the moment in the drives would occur.

In order to prevent wear, the loop should be adjusted to run freely between the guides. In this operating condition, the moment of the drive is giving no indication of the lengths of the loop.

Therefore it is an inventive idea, to measure anyhow the moment of the drives for adjusting the chain. To take the moment of the drive as an indication, it is necessary to produce such an indicative signal by driving the chain against the guide. This position is then taken as a reference for adjusting the loop by a fixed value of chain lengths. It must be noted, that this adjustment is not done proportional to the measured value, that means not to the moment, but to a different physical value which is a constant length.

To combine these different ideas in a combination of steps for a method of adjusting a treatment machine with guided loops of a chain is new and inventive. No person skilled in the art could derive the features of the present invention with a combination of steps by combining the features of the cited references.

Turning now to the references and in particular to the patent to Weber, it can be seen that this reference discloses a conveyor with a

horizontal loop. The operation condition of a conveyor belt is very different to a chain drive. The conveyor belt is moved by the friction of the belt on a drum which is driven by an electric motor. Therefore the maximum moment of the drive is given by the maximum friction of the conveyor belt on the drum. This friction is a function of the angle, the conveyor belt is touching the drum, and the tension of the belt. The additional motor is only for adjusting the belt tension and not for driving the belt. Therefore this reference is lacking the features of the subject clause of the present invention. Weber does not describe a vertical loop. The loop is also not guided. There is further no treatment station. There is only one drive instead of at least two drives. The drives of Weber are not synchronized. And the conveyable is under tension and not operated at a condition wherein it is neither slightly pulled nor compressed, because at this condition, the conveyor belt could not operate since the friction between the drum and the belt would become zero. In view of these constructions, no person skilled in the art would consider Weber as a pertinent reference.

The patent to Henkel describes a machine having a long drive chain driven by a plurality of drive motors. The object of this reference is, to adjust the distribution of the load among the plurality of drive units. This object is solved by a plurality of hydrostatic converters.

No person skilled in the art would consider this reference as being pertinent, because the object of the present invention is not to equalize the load of the drive units, but to keep the loop of the chain clear between the guides. To reach this object, the drives in the present invention must be able to take different loads, for instance if only parts of the chain are loaded with bottles. If the persons skilled in the art would consider Henkel, the present invention would make use of hydrostatic speed converters which would make the machine according to the present invention inoperable. The operating condition of the mining machine described by Henkel, is much the same as a conveyor belt only with the difference, that there is a positive lock with the chain with sprocket wheels instead of the friction between the belt and the drum of the drive.

Therefore Henkels machine is lacking the features that the chain has to be always tightly pulled for allowing the machine to perform its transportation duty.

The present invention cannot be derived from the combination of the reference since even combining the patents to Weber and Henkel, it is not possible to arrive at the new features of the invention.

Claim 7 is further rejected in view of the patent to Viebach. Again there is no hint in this reference, to solve the object of the present invention. In the Viebachs machine the problem for adjusting the sag of the loop does not at all occur. In Viebach, the angular position of one drive with respect to a driven packer box has to be solved. There is no hint how to adjust adjacent drives in a manner that the slack of the loop being driven by these motors could be adjusted. Therefore also this reference is not pertinent.

Finally the Examiner cites the patent to Pelzer with respect to claims 8 to 10. In Figure 2 of Pelzer there is shown the distribution of tension in a belt drive, which is considerably different from the chain with vertical loops in the present invention. Pelzer also does not describe the problem, how to adjust to motors relatively to each other in order to control the vertical loop between them. Therefore also Pelzer is not pertinent.

It is therefore believed to be clear that the new features of present invention are not disclosed in the references and can not be derived from them either taken singly or in combination with one another.



In order to arrive at the present invention from the teachings of the references, the references have to be fundamentally modified by including into them the features which were proposed by the applicant in the present application. It is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has also been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision *in re Randol and Redford* (165 USPQ 586) that

Prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Definitely, the prior art represented by the references does not have any hint or suggestion for such modifications.

In view of the above presented remarks and amendments, it is believed that the present application should be allowed, and such features are earnestly solicited.



Reconsideration and allowance of present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Any costs involved should be charged to the deposit account of the undersigned (No. 19-4675). Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,



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Amended claim 1:

1. A method of adjusting a treatment machine in which a transporting chain for transporting objects to be treated is guided in vertical loops through at least one treatment station in a machine housing and driven at least at two locations by drives which in a normal operation are synchronized and adjusted relative to one another so that the transporting chain in its guides is neither tightly pulled nor compressed, the method comprising the steps of:
 - A. Selecting two drives which follow one another in a forward direction of the transporting chain;
 - B. asynchronously driving the selected drives, so that a chain portion located therebetween is tightly pulled or compressed by producing a length difference, and measuring a parameter which is dependent from a drive moment of one or both selected drives;
 - C. when the parameter reaches or exceeds a fixed value, operating the drives asynchronously for reducing the previously produced length difference by a predetermined amount;

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- D. subsequently maintaining the adjusted relative position of the both drives relative to one another, with synchronous operation of the drives;
- E. using the preceding steps for further drives, until chain lengths in all chain portions to be adjusted are adjusted.